

Application No. 09/387,788
Amendment dated June 23, 2004
Reply to Office Action dated April 23, 2004

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REMARKS

Claims 1 and 3-23 are pending, with claims 1 and 16 being in independent form. Entry of the present amendment would result in claims 3, 5, 9, 10, and 12 being amended, and claim 1 being canceled without prejudice or disclaimer.

At the outset, the Applicant acknowledges with appreciation the continued indication of allowable subject matter.

In the final Office Action, claims 1, 3-7, 9-17, 22, and 23 stand rejected for anticipation by International Publication No. WO 94/18752 to Love. The Applicant believes the claims as would be pending following entry of this Amendment are allowable over the cited document.

Anticipation requires that every feature of the claimed invention be shown in a single prior document. *In re Paulsen*, 30 F.3d 1475 (Fed. Cir. 1994); *In re Robertson*, 169 F.3d 743 (Fed. Cir. 1999). The proposed claims positively recite features that are not described in the cited document.

For example, claim 16, recites, among other things, an apparatus for receiving a spread spectrum signal comprising "a plurality of fingers", and a Doppler frequency estimator "configured to use two or more channel estimates from said one of the fingers to generate a Doppler frequency estimate". Love does not disclose an apparatus for receiving a spread spectrum signal having a plurality of fingers, much less using two or more channel estimates from one of the plurality of fingers to generate a Doppler frequency estimate. The Office asserts that Love discloses an apparatus having a plurality of fingers in FIG. 3, and on page 3, lines 13-21, and page 8, lines 11-21 of the document, but the Applicant respectfully disagrees.

Persons skilled in the art would understand that the term "finger", as recited in claim 16 the context of an apparatus for receiving a spread spectrum signal, refers to the portion of a RAKE receiver configured to receive one of the several different paths (or rays) of an incoming signal that may exist in a multi-path environment. The Applicant's use of the term throughout the specification is consistent with this plain meaning, as would be understood by those skilled in the art. For example, FIG. 3 shows that each finger, e.g., 410, in a RAKE receiver 400 includes correlation and code generation circuitry that is configured to "de-spread" a different path 411 of the received signal 201 to determine a channel estimate 601 for the path 411. Such RAKE receivers are popular in spread-spectrum communication systems, such as

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the Code Division Multiple Access (CDMA) system described throughout this application.

In contrast, Love describes a non-spread-spectrum, Time Division Multiple Access (TDMA) system. For example, Love states at page 5, lines 18-20, that "[t]he radio transmission system (10) operates under a time sharing format with separate time slots 1 to j as shown in FIG. 2 (t indicates time)". Persons skilled in the art would understand that this passage describes a non-spread-spectrum TDMA communication system. Love further describes that the system 10 includes an Adaptive Maximum Likelihood Sequence Estimator (AMLSE) to address multi-path propagation. Love's AMLSE is shown in FIG. 3, which the Office asserts discloses the plurality of fingers recited in claim 16. But not surprisingly, Love's AMLSE 13 does not include any of the code generation circuitry that would be indicative of the presence of one, much less a plurality of fingers, as recited in the claim. This is because Love's non-spread-spectrum TDMA system 10 does not require such code generation circuitry to "de-spread" the received signal.

Since Love does not disclose any fingers, much less a plurality of fingers, it follows that the cited document does not disclose a Doppler frequency estimator configured to use two or more channel estimates from one of the plurality of fingers to generate a Doppler frequency estimate, as recited in claim 16. Indeed, the Office appears to acknowledge as much in the final Action by indicating that claims 20 and 21 would be allowed if re-written in independent form. These claims separately define that the estimates from: (1) the strongest finger, and (2) a finger other the strongest finger, are used to generate the Doppler frequency estimate. Thus, combined, these claims define that estimates from any one of the fingers can be used to generate the Doppler frequency estimate, which is precisely what is defined in claim 16.

Accordingly, claim 16 is believed not to be anticipated by Love for at least the above reasons. Moreover, entry of this Amendment would result in the remaining claims depending either directly or indirectly from claim 16. Thus, these claims would be allowable for at least these same reasons.

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For the foregoing reasons, the Applicant believes entry of this Amendment would put the application in condition for allowance. Thus, it is respectfully requested that the Amendment be entered, and a Notice to this effect be provided. If any questions remain, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,

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